

Datasheet for 100-401-153**Cyclin D1 Antibody****Overview**

Description:	Anti-Cyclin D1 (RABBIT) Antibody - 100-401-153
Item No.:	100-401-153
Size:	100 µL
Applications:	ELISA, WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

Background:	Cyclin D1 (also known as G1/S-specific cyclin D1, PRAD1 oncogene, BCL-1 oncogene, and PRAD1: parathyroid adenomatosis 1) is encoded by a gene that belongs to the highly conserved cyclin family. Cyclins are characterized by a dramatic periodicity in protein abundance throughout the cell cycle and function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns, which contribute to the temporal coordination of each mitotic event. Cyclin D1 forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. This protein has been shown to interact with tumor suppressor protein Rb and the expression of this gene is regulated positively by Rb. Mutations, amplification and overexpression of this gene, which alters cell cycle progression, are observed frequently in a variety of tumors and may contribute to tumorigenesis.
Synonyms:	rabbit anti-cyclin D1 antibody, G1/S-specific cyclin-D1, PRAD1 oncogene, BCL-1 oncogene
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	CCND1
Reactivity:	Human
Immunogen Type:	Native Protein

Immunogen:	Anti-Cyclin D1 was produced by repeated immunizations of full length fusion protein corresponding to the human gene sequence.
Purity/Specificity:	This product was prepared from monospecific antiserum by delipidation and defibrination. Antiserum will specifically react with a 40-45 kDa Cyclin D1 protein from human, rat and mouse tissue. No reaction was observed against other related cyclins. Cross reactivity with Cyclin D1 from other species may also occur.
Relevant Links:	• UniProtKB - P24385 • NCBI - NP_444284.1 • GenelD - 595

Application Details

Tested Applications:	ELISA, WB
Application Note:	This antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 34 kDa in size corresponding to Cyclin D1 by western blotting in the appropriate cell lysate or extract. MCF7 may be used as a positive control. Anti-Cyclin D1 is suitable for the detection by immunoblot of human, rat and mouse Cyclin D1.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:2,000 - 1:10,000
IP:	1:100
WB:	1:500 - 1:1,000

Formulation

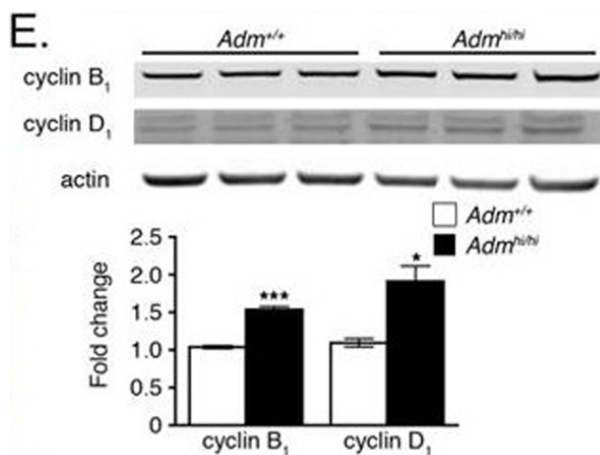
Physical State:	Liquid (sterile filtered)
Concentration:	85 mg/mL by Refractometry
Buffer:	None
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
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Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



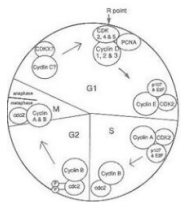
Western Blot

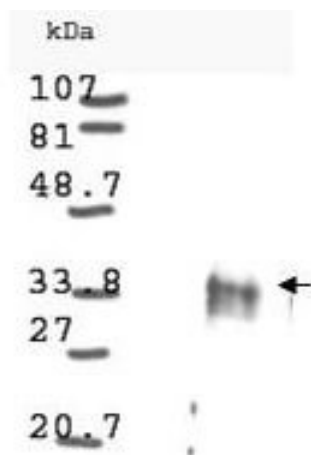
Enhanced proliferation of Adm^{hi/hi} hearts during embryonic development.

E: Representative Western blot for cyclin B₁ and cyclin D₁ normalized to actin. Each lane on the blot is loaded with protein lysates from individual postnatal day 1 pups. Differences in lane loading were accounted for by normalizing each cyclin band to the corresponding actin band for each lane. These numbers were then normalized to a wild-type sample to compute the fold change. Fig 5. PMID: 24123312.

Diagram

A model summarizes the interactions between cyclins and the cyclin dependent kinases in multicellular animal cells. The R point is the restriction point. The diagram shows the stages of the cell cycle and the binding of the specified cyclins with the corresponding CDKs at each stage. cdc2 is kinase, p107 and E2F are proteins involved in transcription. See Pines, J. (1993).





Western Blot

Western blot analysis is shown using Rockland's Anti-Cyclin D1 antibody to detect Human Cyclin D1 present in asynchronous HN30 cell lysates. HN30 cells, are from head and neck cancer cells that over express cyclin B1 and D1. Comparison to a molecular weight marker indicates a band of ~34 kDa corresponding to the expected molecular weight for the protein (arrowhead). The blot was incubated with a 1:500 dilution of the antibody at room temperature. Detection occurred using a 1:10,000 of HRP conjugated Goat-a-Rabbit IgG (p/n 611-103-122) and chemiluminescence reagent with a 1-min exposure time. Other detection systems will yield similar results. Personal communication Luca Cote.

References

- Wetzel-Strong, SE et al. Epicardial-derived adrenomedullin drives cardiac hyperplasia during embryogenesis. *Developmental Dynamics : An Official Publication of the American Association of Anatomists* (2014)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.